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"Last evening, about nine o'clock, I had an excellent view of the planet under magnifying powers of 200 and 320, and on careful examination I noticed, chiefly on the side following in right ascension, a faintly illuminated border of light, partly filling up what usually appears to be the black ground of the heavens between the ball and interior edge of inner ring. Its breadth seemed to me about half that of the outer ring, and though I could not discern anything like a division between the faint light and the interior edge of the ring, this might very possibly be owing to want of higher power, which the night did not bear advantageously. The inner edge was *at times* very well defined. The appearance was steadily visible on the side following in right ascension, but I could only perceive it by momentary glimpses on the preceding one. Mr. Lassell's account of his observations upon *Saturn* with Mr. Dawes' refractor, Dec. 3, is perfectly in accordance with the phenomenon I have alluded to above. My observation is therefore merely in consequence of this notification from Mr. Lassell."

A very beautiful drawing of *Saturn*, by Mr. De la Rue, as seen in his 13-inch reflector, will be exhibited at the January meeting. It fully confirms Mr. Bond's discovery, and Mr. Dawes' sketch.

On the Ring of Saturn. By the Rev. W. R. Dawes.

"After the re-establishment of my observatory at my present residence, until the last week in November, the state of the air was very unfavourable for observation. During that week and the first of this month, some good opportunities have occurred; and I beg leave to lay before the Society a few extracts from my observatory journal relating to the telescopic appearances of the ring of *Saturn*, which have been in some respects remarkable.

"1850, Nov. 23. With 8½-foot equatoreal refractor. *Saturn*; power 125. Very brilliant and sometimes sharply defined. Now and then fancied a faint lucid point near the following arm of the ring; but it was not satisfactorily verified with 425. While looking steadily for it (with power 425) some very good views of the planet occurred, and I sometimes suspected that the outer ring had a short and narrow line upon it near its extremity. On scrutinising the preceding arm, I occasionally get the same impression. *Query*, Is the division in the outer ring becoming visible again? *Mem. Ask Lassell to look for it.*"

The following morning I received a letter from Mr. Lassell, dated Nov. 22, in which he says: "Last night, in about a single hour of *fine* sky, I was favoured with a view of *Saturn*, accompanied by his eight satellites; some of them in trying positions." Then follows a diagram of their positions in reference to the planet, at $8^h 40^m$ G. M. T.; and also a larger diagram of the planet itself. Mr. Lassell then adds: "I had repeated impressions of a secondary division; and, if it be real, it is one-third of the breadth of the outer ring from its outer edge. The suspicion was the same from both ansæ . . . . Powers from 219 to 614; full aperture always:" viz. 24 inches.

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To proceed with the extracts from my journal.

"Nov. 25. Clear night, and occasionally good telescopic vision. *Saturn.* With 282, I was satisfied that, in finest moments, a very narrow and short line was discernible on the outer ring near its extremities; which was confirmed with power 425, with which the phenomena of the planet were better brought out.

"Nov. 29. Sharp frost; clear sky. *Saturn*, $6^h\ 45^m$ G. M. T. Having applied higher powers, and viewed the planet steadily for a considerable time, I obtained several satisfactory glimpses of a division near the extremity of the outer ring. It was occasionally seen with power 323; but far more certainly with 460. After a few seconds of uncommonly sharp vision, I involuntarily exclaimed, '*Obvious.*' There is a *shading*, like *twilight*, at the inner portions of the inner ring, $7^h\ 30^m$. On looking again at *Saturn*, power 460, I am struck with the beauty of the image, and get frequent glimpses of the division in the outer ring: it is improved by a little illumination of the field, and is usually rather best seen at the *following* extremity.

"$8^h\ 40^m$. Examined *Saturn* with the Dollond micrometer and Barlow lens, power 375. Vision is occasionally fine. At times I am pretty sure of the lines on the extremities of the outer ring; but rather most so on the *following* side. The preceding extremity seems rather more dusky than the following one, and scarcely so distinct. There is an exceedingly narrow black line on the ball at the *southern* edge of the ring where it crosses the planet; and it is slightly broader at the east and west edges of the ball than near its middle. It is perhaps one-third the breadth of the shadow of the ring on the ball to the *north* of the ring. What can it be? It looks like a shadow; but how can the shadow of the ring be visible both on the north and south sides of it?

"$8^h\ 55^m$. The interior portion of the inner ring is rather *suddenly* shaded off, and towards the inner *edge* scarcely reflects sufficient light to be always sure of its outline. It has struck me, that the dark line which I see at the southern edge of the ring where it crosses the ball, is nothing else but this shaded, or rather *unreflective*, portion of the ring, which at this part is projected into a very narrow line: but it certainly appears to widen a little towards the edges of the ball. On further consideration, I believe this must be the true explanation of this narrow dark line, which I cannot otherwise account for. The dusky portion of the inner ring, which I have particularly described and recorded to-night, I saw very well, and precisely in the same way, on the 25th; but being then engaged with visitors to the observatory, I did not record the appearance. I then however determined to scrutinise the phenomenon the first favourable opportunity. Its appearance is very much like that of a dull unreflective portion of the moon when the sun is shining upon it very obliquely. I think its breadth is rather less than that of the inner portion of the outer ring."

On Dec. 2d, I was favoured with a visit from Mr. Lassell; and the evening of the 3d proving fine, the telescope was turned upon *Saturn*. A wheel of convex lenses, made by Dollond for Mr. Lassell,

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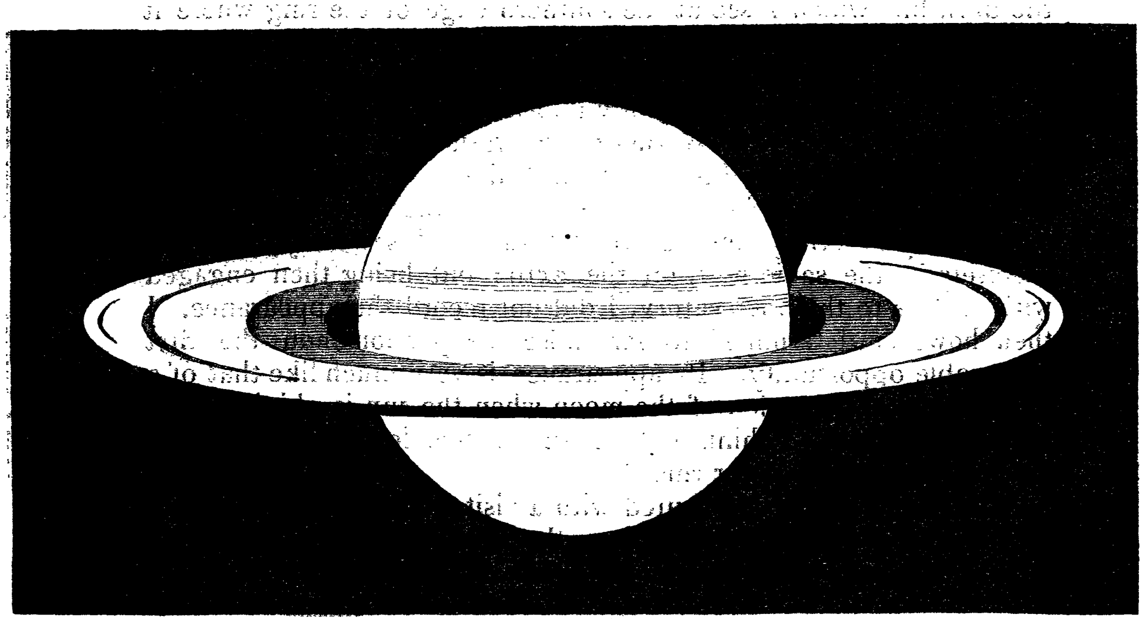
was applied to the telescope; and with these the planet was subjected to a careful scrutiny: immediately after which, Mr. Lassell made the following entry in my observatory journal, accompanied by a sketch of the planet; "1850, Tuesday Dec. 3; 9^h 15^m G. M. T. *Saturn:* 8½-foot achromatic, powers 298 and 363. I find I cannot do justice to the view of the planet; but the phenomenon which struck me as most peculiar was, that the space between the inner diameter of the inner ring and the ball was bisected, or rather half covered, by an appearance as if a crape veil had been thrown over it. There is a dark inner edge to the bright ring, which shades off a little, the dark ring is then of a uniform grey colour: the sky is seen black between Bond's ring and the planet. The belt on the equator of *Saturn* was ruddier than the southern portion, but scarcely more marked;—there being a most striking difference of colour between the whole district south of the northern edge of the belt, and the portion north of that line. I am not certain that I saw any secondary division of the ring. A minute dark line or shadow I also observed running along the southern edge of the ring, where it crossed the front of the ball; and this line was rather broader at its ends, projected on the limbs of *Saturn*, than in the middle." "[This last sentence added on the morning of the 4th, having forgotten to record it at the time.—W. LASSELL."]

"Dec. 5, at 7^h G. M. T. Generally star-light, but rather hazy and dull. *Saturn.* The haze is rather too thick for the use of high powers, but during clearer moments, 323 is borne very well; and the definition, though variable, is at times very good. The *obscure ring* is occasionally well seen. I get an impression of a dark shade immediately in contact with the bright ring, but not amounting to black, and certainly not *so* black as the principal division in the ring; yet it is, I think, nearly as broad. Then comes a faintly illuminated ring concentric with the bright one. Its breadth is about equal to the inner portions of the outer ring.



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"7^h 30^m. The planet is a little clearer, and bears 460 very well. With this power, by occasional good views, the phenomena come out more decidedly than with 323 . . . . I cannot distinctly make out any division in the outer ring. On comparing the breadth of the dark shade south of the ring, with the breadth of the obscure portion of the inner ring as seen at the ansæ, it seems to agree in its proportions with the elliptic form of the ring; and I cannot doubt that it is that obscure portion projected on the ball."

A sketch by Mr. Dawes of the appearance of the planet and its rings as subsequently seen by him, is represented in the annexed woodcut. This is only to be considered as an *illustration*, for neither the time nor the material allowed of any very careful rendering. The upper shadings on the body of the planet are incorrect, and may be considered as non-existing.

Remarks on the foregoing extracts.

"1. With reference to the division in the outer ring. It would seem too improbable that the same impression should be received by two observers, in different localities, without previous communication on the subject, and using instruments so different in character as Mr. Lassell's twenty-foot reflector and my refractor, unless there were some real ground for it; and it is therefore very desirable that this point should be carefully examined on every favourable opportunity by those who possess telescopes competent to the work. Very distinct definition with a power of 300 or 400 times is requisite to show it, and the primary division of the ring must appear black and clear. It is worthy of notice too, that on Nov. 23, when I first observed it, I was engaged in looking for a suspected close satellite, and was not examining the ring, or thinking at all about it. The dark line at the extremity of the outer ring obtruded itself several times upon my notice; and after continued scrutiny with power 425, I remained satisfied of its existence. Of course, a very slight disturbance of the image is sufficient to obliterate the appearance, and the impression was obtained from several fine sharp glimpses of only a few seconds in duration,—grievously tantalising indeed, yet quite sufficient to produce conviction. It is true, that this appearance is not always visible, even under favourable atmospheric circumstances; but it is quite possible that this may be a necessary consequence of the condition of the rings themselves.

"2. The appearance of the interior portion of the ring is very different from what I have ever seen before with this or any other telescope. The shading-off of the ring strikes me as far more decided and abrupt, and also as very much darker, than it used to be. Moreover, the interval between the inner edge of the ring and the ball, as I have been accustomed to view it, and as it has been usually depicted, is now encroached upon by what appears like a very faint continuation of the breadth of the inner ring, occupying, perhaps, about four-tenths of the interval between the edge of the ball and the interior boundary of the bright part of the ring. My telescope does not indicate to me that this interior portion is *separated* from the bright ring; for the line of demarcation between them is not so black as the principal division in the ring. It looks rather as though the more diffused shading, or belt, which alone was formerly visible on the interior portion of the bright ring, had contracted into a narrower compass, and become of a far deeper shade.

"It may, perhaps, be worthy of consideration, whether the fact of the total absence of sunshine for fifteen years on the southern side of the ring, from which state it has so recently emerged, may have had any effect in producing the present appearances; and it will be highly interesting to observe whether they become modified as the sun rises higher above the plane of the ring, and as the breadth of the ellipse increases. It must be acknowledged, however, that the circumstances of the planet were in this respect the same in 1791 and the following years, when Sir W. Herschel paid so much attention to its phenomena. In a paper read before the Royal Society, January 23, 1794, he thus sums up the appearances of the double ring:—'The outer ring is less bright than the inner ring. The inner ring is very bright close to the dividing space; and at about half its breadth it begins to change colour, gradually growing fainter; and just upon the inner edge it is almost of the colour of the dark part of the quintuple belt.'

"As Mr. Bond's observations were made with an instrument so superior to mine, and under remarkably favourable circumstances, it is quite possible that they may place the phenomena in a very different light. As however all my observations, with the exception of those on the 5th, were made in total ignorance of any remarkable appearances having been noticed by any other observer, I have thought it desirable to request the Society's acceptance of them.

"That the appearances which have lately forced themselves on my attention when viewed through a telescope of moderate dimensions should not have been noticed by previous observers employing far larger instruments, seems to furnish additional evidence of recent change. Sir W. Herschel diligently observed this planet; yet only on four occasions did he notice anything remarkable in the interior portion of the ring, beyond slight shading off, which is represented in one of his figures of the planet, but is not thought worthy of more particular description than that quoted above. Professor Struve remarks (*Memoirs of the Astronomical Society*, vol. ii. page 517): 'As to a division of the ring into many parts, I have noticed no trace. It is remarkable that the outer ring is much less brilliant than the inner. The inner one, too, towards the planet, seems less distinctly limited, and to grow fainter, so that I am inclined to think that the inner edge is less regular than the others.' At that time the same side of the ring was presented to our view as at present; and the ring was so open that the north pole of the planet was hidden by it. Neither did Sir J. Herschel at the Cape of Good Hope notice anything like the present appearances, though *Saturn* was nearly in the zenith, and the climate so favourable.

"No night has occurred since the 5th of sufficiently fine quality to permit micrometrical measures to be taken of the different portions of the ring; but these I shall endeavour to procure the first opportunity."

VICTORIA.

Some objection has been taken, though, we believe, only by one or two persons in the United States, to the name of *Victoria*, as applied to the new planet discovered by Mr. Hind.* It seems to have been forgotten that her Majesty's name is derived from the goddess, who cannot thereby lose her celestial rights. Victoria was recognised as a deity by those who deified Egeria, &c. "Video Virtutis templum .... Quid Opis, quid Salutis, quid Concordiæ, Libertatis, Victoriæ."—*Cicero de Nat. Deor.* lib. ii. § 23.

The following extract from Mr. Hind to the Astronomer Royal will show that there is no intention of changing the name:—

"Since I received your letter of Oct. 1, I have never entertained the slightest idea that any other name than *Victoria* would be employed in Europe, and consequently have fully intended to adhere to it myself. I am quite sure Mr. Bishop is of the same intention. Professors Schumacher, Gauss, Encke, and Argelander, have adopted this name without hesitation; the only opposition that I am aware of has been offered by a part of the American body of astronomers; and I hope, in course of time, for the sake of uniformity, they will use the European name."

The following note from the Hon. Edward Everett to Captain Smyth relates to the same subject:—

"I perceive that Mr. Hind has received the impression from Mr. Gould (editor of the *Astronomical Journal*), that the American astronomers were not disposed to acquiesce in the name of *Victoria*, proposed by him for the last asteroid. When that name was first proposed, it was considered by some persons to be inconsistent with the principle which had been agreed upon, in reference to the designation of newly-discovered bodies. But as Mr. Hind states that he regards '*Victoria*,' in this connexion, as the name of a mythological personage, I cannot think that its coincidence with that of your sovereign ought to forbid its use. Mr. Bond fully agrees with me in this opinion; and there is no one in this country of higher authority than he on any astronomical question."

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* M. Gasparis has a great advantage in having at his choice local deities, Parthenope, Egeria, Ilia, &c., which link the country of the discoverer with his discovery. We ultramontanes have no similar good fortune, unless, as in the present case, the sovereign should bear the name of a goddess.